

BONSMARA

GENOMIC BREEDING VALUE REPORT



Herd Number:

E-mail:



EBVs, EBVi's and GEBVs

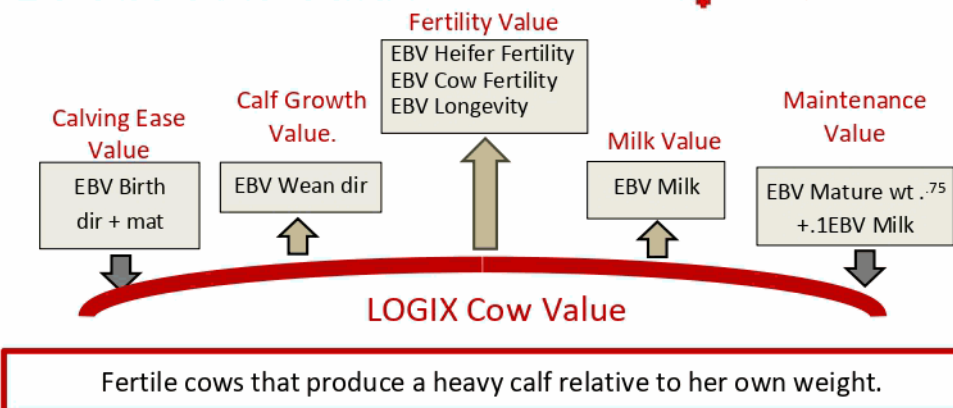
EBVi (Breeding Value Index): Genetic potential relative to the average (100) of the live (active) animals in the breed. Roughly 50% of the animals have values between 90 and 110. Values above 100, depending on the trait, tend to be in the more favourable direction.

EBV (Breeding Value): Genetic potential relative to the average of the animals born in the base year (1990), expressed in the unit of measurement.

GEBV (Genomic Breeding Value) Interpreted like the EBVi. (GEBV = EBV + Genomic information)

LOGIX Selection values combine different breeding values in a logical way. For example, Heifer Fertility (how early a heifer starts calving), Cow Fertility (how regular she calves) and Longevity (retention within the family) are combined to form the Fertility Value.

LOGIX Cow Value



Selection Values

LOGIX Cow Value



Selecting for:

- fertile,
- low maintenance,
- easy calving cows
- with heavy weaners

LOGIX Growth Value



Select for efficient growers on veld and in feedlot, as measured in Phase C and D Growth Tests.

How to use the Cow Value

Selection values should be compatible with your selection goal.

AVERAGE ANIMALS

(NO GROWTH EXTREMES)

- Selection Values 90 to 110
 - Cow Value and Fertility Value average to high
- A safe choice, as animals are profitable in most environments.

GROWERS

(GOOD ENVIRONMENT)

- WeanerCalf / Growth Value > 120
 - Cow Value and Fertility Value average to high
- Growers are usually heavier at birth (lower Calving Ease Value), and maturity (lower Maintenance Value).

LOW- MAINTENANCE ANIMALS

(HARSH ENVIRONMENT)

- Maintenance Value >110
 - Cow Value and Fertility Value average to high
- Lighter cows have a lower maintenance.

LOGIX Weaner Calf Value



Select for:

- heavy weaners
- more milk and
- lower birth and
- cow weights

LOGIX Carcass Value



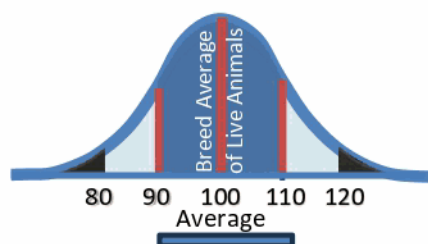
Select for more meat on the carcass as measured from end weight in Phase C and D Growth Tests and RTU scanning.

LOGIX Production Value



80% LOGIX Cow Value +
20% LOGIX Growth Value

Interpretation of EBVi and Selection Values



Examples

Type of Animal	Cow Value	Calving Ease V	Weaner Calf V	Milk Value	Maint. Value	Fertility Value
Average	Med-High	Avg	Avg	Avg	Avg	Med-High
Grower	Med-High		High			Med-High
Low Maintenance	Med-High				High	Med-High

	EBVi	Description / Measurement	Goal	Low Value	High Value
Selection Values	Calving Ease Value	Difficult calving due to high birth weight	Average birth weight	High	Low
	Calf Growth Value	Calf's genetic ability for prewean growth	Heavy weaner	Light	Heavy
	Milk Value	Cow's genetic mothering and milking ability	Enough milk for calf	Less	More
	Maintenance Value	Maintenance requirement of cow (weight and milk)	Low cow maintenance	High	Low
	Fertility Value	Fertility and retention of cows and heifers	Fertile cows	Low	High
	Cow Value	Combination of calving ease, calf growth, milk, maintenance and fertility values (Rand-value per Ha)	Profitable cows	Loss	Profit
	Weaner Calf Value	Heavier weaners and more milk, with lower birth and cow weights	Heavy weaner	Light	Heavy
	Growth Value	Efficient growth on veld and in feedlot (Rand-value per animal)	Profitable growth	Loss	Profit
	Production Value	Combination of Cow- and Growth Values (Rand-value)	Profitable animals	Loss	Profit
	Carcass Value	Meat on carcass (Weight and RTU EBVs)	Meat on carcass	Less	More
Birth	Cow weight - birth	Cow weight at birth of calves	Mature cow weight	Light	Heavy
	Birth weight direct	Birth weight (Calf's genetic ability)	Average birth weight	Heavy	Light
	Cow-Calf birth	EBV Birth dir / EBV Mature cow weight	Average	Low	High
Wean	Cow Weight wean	Cow weight at weaning of calves	Mature cow weight	Light	Heavy
	Weaning weight direct	Weaning weight (Calf's genetic ability)	Heavy weaners	Light	Heavy
	Weaning weight mat	Weaning weight (Dam's genetic ability)	Good mothers	Poor	Good
	Cow-Calf Wean	EBV Wean dir / EBV Mature cow weight	High cow-calf ratio	Low	High
Growth & Adaptation	Post-Wean weight	12- and 18mnth weights	Post-wean growth	Low	High
	Ave. Daily Gain	Average daily gain in growth test (Phase C and D)	Good growth	Poor	Good
	Veld Growth	ADG on veld (Phase B)	Good adaptation	Poor	Good
	Feed Conversion Ratio	100g feed intake / g weight gain	Feed Efficiency	Poor	Good
	Final Test Weight	Final weight in growth test (Phase C and D)	Heavy Carcasses	Light	Heavy
	Skin Thickness	Measured in growth tests	Thicker skin	Thin	Thick
	Scrotal Circumference	Scrotal circumference in growth test	Fertile bulls	Less	More
Fertility	Heifer Fertility	Age at first calving	Fertile heifers	Less	More
	Cow Fertility	First 3 inter-calving periods (ICPs)	Fertile cows	Less	More
	Longevity	Retention of progeny	Acceptable progeny	Poor	Good
Frame	Height	Shoulder / Hip height in growth test	Average height	Short	Tall
	Length	Length in growth test	Longer (more meat)	Short	Long
	Length:Height	EBV Length / EBV Height	Longer, not higher	Less desirable	More desirable
Carcass	Eye Muscle Area	RTU Eye muscle area	Muscle in carcass	Small	Big
	Fat	RTU P8 Backfat Thickness	Carcass quality & adaptability	Thin	Thick
	Marbling	RTU % Marbling	Juicy meat	Low	High
	Dressing%	Carcass weight / Live weight	High dressing %	Low	High

Herd and Breed Averages

130
120
110
100
90
80
70

	Trait	EBV Herd	EBVi Herd	EBV Breed
Prewrite Growth	Birth Weight			
	Wean Weight			
	Birth Mat.			
	Milk (Wn.Mat.)			
Postwean Growth	Postwean Wt			
	Mature Weight			
	ADG			
	VeldGrowth			
	FCR			
Fertility	Scrotal Circumf.			
	Heifer Fertility			
	Cow Fertility			
	Longevity			
Frame	Height			
	Length			
Carcass	EMA			
	Fat			
	Marbling			

Selection Value	Ave. Herd
Calving Ease	
Calf Growth	
Milk	
Maintenance	
Fertility	
Cow Value	
Weaner Calf Value	
Growth Value	
Production Value	
Carcass Value	

Genomic Breeding Values (GEBVs):

Brth:	Birth weight	Scr:	Scrotal circumf.
Wn:	Weaning weight	HF:	Heifer Fertility
B.m:	Birth maternal	CF:	Cow Fertility
Mlk:	Milk	LL:	Longevity
PW:	Post-wean weight	Ht:	Height
MW:	Mature weight	Ln:	Length
ADG:	Average Daily Gain	EMA:	Eye Muscle
FGwth	Veldgrowth	Fat:	Fat
FCR:	Feed Conversion Ratio	Mar:	Marbling

Selection Values:

CEV:	Calving Ease Value
CGV:	Calf Growth Value
MkV:	Milk Value
MnV:	Maintenance Value
FV:	Fertility Value
CV:	Cow Value
WCV:	Weaner Calf Value
GV:	Growth Value
PV:	Production Value
CCV:	Carcass Value

- Average of live animals in the breed: 100
- Above 100: **more favourable**,
- Below 100: **less favourable**

What does a sub-selection value above breed average (100) mean?:

Calving ease:	Smaller calf at birth - easier calving
Calf growth:	Heavier calves at wean due to growth potential of the calf
Milk:	Cows with more milk and better mothering ability
Maintenance:	Animals with low maintenance requirements (lower mature weight).
Fertility:	Cows/daughters that calve earlier and/or more regularly.

Genetic Windows

Bulls on the farm

Bulls born in and earlier

Total:

130
120
110
100
90
80
70

Cow Herd

Cows born in and earlier

Total:

130
120
110
100
90
80
70

Sires of young animals

Sires of animals 3 years and younger

Total:

130
120
110
100
90
80
70

Cows older than 6 years

Cows born in and earlier

Total:

130
120
110
100
90
80
70

Bull calves

Bulls born in

Total:

130
120
110
100
90
80
70

Heifer calves

Heifers born in 2024

Total: 12

130	
120	
110	
100	
90	
80	
70	

Summary of Cow Herd

			Selection Values (SV)								Calf Weight		Dam		Growth & Efficiency				Fertility				Frame	
Birth Year	No. Cows	Average Cow Value	Calving Ease	Calf Grwth	Milk	Maint.	Fertility	Cow Value	Growth Value	Prod Value	Birth Weight	Wean Weight	Birth Mat.	Milk (Wn.Mat)	Postwn Weight	Mature Weight	ADG	FCR	Scrotal Circumf.	Heifer Fertility	Cow Fertility	Longevity	Height	Length
Cows in Breed Average:			100	100	100	100	100	100	100	100	100	100	100	100	99	100	100	100	100	100	100	100	101	100
2010	1																							
2012	3																							
2014	2																							
2016	3																							
2017	2																							
2018	1																							
2019	2																							
2022	11																							
2023	9																							
2024	12																							

Cows in Herd Average:

Genetic Trends for On-Farm Traits

The graphs show the genetic gain of the herd relative to the breed. Only data of animals with measurements are included.

Herd

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility						Cow Value		
	Birth Weight		Dir	Mat	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Milk	Postwean Weight		Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Fertility	
	Number	EBV				Number	EBV		Number	EBV		Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number			EBV

Breed

Birth Year	Calving Ease				Calf Growth			Milk			Maintenance					Fertility								Cow Value
	Birth Weight		Mat EBV	Calv. Ease	Weaning Weight		Calf Growth	Milk (Wn.Mat.)		Milk	Postwean Weight		Mature Weight		Maintenance	Heifer Fert.		Cow Fert.		Longevity		Fertility		
	Number	Dir EBV			Number	EBV		Number	EBV		Number	EBV	Number	EBV		Number	EBV	Number	EBV	Number	EBV		Number	
2015	46271	1.02	-0.20	99	37666	13.0	97	37666	2.75	97	26417	22.2	6918	21	103	9284	-5.8	6665	0.1	48497	22.0	92	90	
2016	43605	1.04	-0.22	99	35930	13.2	97	35930	2.87	98	25538	22.8	6538	22	102	8134	-6.0	6283	0.0	45373	22.9	94	91	
2017	45307	1.06	-0.23	99	37527	13.7	98	37527	3.03	98	26102	23.7	6680	22	101	8515	-6.3	6587	0.0	46379	23.9	95	93	
2018	42996	1.05	-0.27	99	35697	13.8	99	35697	3.04	98	24862	23.8	6624	22	101	7919	-6.4	6306	0.0	43550	24.6	95	94	
2019	42958	1.07	-0.29	99	35054	14.4	100	35054	3.03	98	24655	24.7	6806	23	101	8145	-6.8	6580	0.0	42732	25.6	96	95	
2020	43033	1.04	-0.31	100	35806	14.5	100	35806	3.03	98	26174	24.8	7236	22	101	8560	-7.7	6529	-0.2	40869	26.3	99	97	
2021	43090	1.01	-0.33	100	35910	14.8	100	35910	3.06	98	26557	25.6	6065	23	100	8330	-7.7	3803	-0.4	29534	26.9	100	98	
2022	43129	1.00	-0.33	100	36494	15.1	101	36494	3.28	99	26861	26.1	2402	22	100	6237	-8.2	476	-0.5			101	99	
2023	44122	0.98	-0.34	101	36938	15.1	101	36938	3.43	99	26216	26.0	75	30	99	953	-9.2	1	-2.5			104	101	
2024	42552	0.91	-0.33	101	33946	15.1	101	33946	3.49	100	13731	26.8			99									101
2025	25308	0.88	-0.33	101	3306	15.8	102	3306	3.47	100	29	32.7			92									102

Genetic Trends for Growth Test and Carcass Traits

Herd

Birth Year	Growth												Frame						Carcass						Selection Values			
	FCR			ADG			Veld Growth			Scrotum			Height			Length			EMA			Fat		Marbling		Carcass Value	Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	RTU Number	EBV	EBVi	EBV	EBVi	EBV	EBVi			

Breed

Birth Year	Growth												Frame						Carcass						Selection Values			
	FCR			ADG			Veld Growth			Scrotum			Height			Length			RTU Number	EMA		Fat		Marbling		Cracss Value	Growth Value	Prod Value
	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi	Number	EBV	EBVi		EBV	EBVi	EBV	EBVi					
2016	245	-45	105	7605	74	99	16304	30	98	9082	10.9	97	8941	0	103	7635	14	100	1897	0.56	99	-0.42	97	-0.13	99	97	97	93
2017	659	-45	105	8459	77	100	16290	29	98	9041	11.7	98	8541	0	104	8457	14	101	3129	0.65	100	-0.38	98	-0.08	100	99	98	94
2018	628	-41	103	8227	79	100	15371	30	98	8717	11.8	99	7978	0	103	7980	14	101	2986	0.85	102	-0.46	97	-0.08	100	100	98	95
2019	628	-44	104	8521	81	101	14826	31	98	8900	12.3	99	8361	-1	102	8364	15	102	3151	1.21	105	-0.40	97	-0.05	100	103	99	97
2020	636	-47	106	8817	82	101	15886	32	99	9374	12.7	100	8824	-2	102	8827	15	102	4040	1.02	103	-0.16	99	-0.11	99	103	100	99
2021	664	-43	104	8962	85	102	16252	33	99	9619	13.0	101	9225	-2	101	9224	15	102	3802	1.11	104	-0.09	99	-0.22	98	105	101	100
2022	728	-46	106	8922	89	103	16279	34	100	9815	13.5	102	9649	-2	101	9652	15	102	4279	1.22	105	0.11	101	0.00	101	106	102	102
2023	763	-45	105	8756	89	103	15661	35	100	9482	13.9	102	9575	-3	100	9566	15	102	4124	1.31	106	0.20	101	-0.07	100	107	102	103
2024	768	-46	106	5212	96	105	7490	36	101	5131	14.2	103	5414	-3	100	5377	16	103	3220	1.29	106	0.35	102	0.08	102	108	104	105
2025	11	-50	108	14	133	115	13	65	112	2	15.1	104	13	5	110	13	24	111	13	1.04	104	0.58	104	0.67	109	115	112	114

Sires

Bull		Selection Values										Birth			Wean				Grwth & Adaptation					Fertility				Raam		Carcass			Progeny																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
ID	Comp.nr	Genomic	Sire ID	Dam ID	Calv. Ease V	Calf Growth V	Milk Value	Maint. V	Fertility V	Cow Value	Weaner Calf V	Growth Value	Prod. Value	Carcass V	Cow wt brth	Birth wt	Cow-Calf birth	Cow wt wean	Wean wt	Wean mat	Cow-Calf wn	Post wn wt	ADG	Veld growth	FCR	Skin Thickn	Scrotum	Heifer Fert	Cow Fert.	Longevity	Height	Length	EMA	Fat	Marbling	Nr measured																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Breeding Values and Accuracies: Bulls

Inbreeding in red is high

Value <80

Value >120

Breeding values with an accuracy < 5% are not printed

Animal				Selection Value										Birth			Wean				Growth & Adaptation				Fertility				Frame		Carcass				
ID	Animal no	% Inbreeding	Genomic Parentage	Index EBV Acc	Calv. Ease V	Calf Growth V	Milk Value	Maint. V	Fertility V	Cow Value	Wean Calf V	Growth Value	Prod. Value	Carcass V	Cow wt -brth	Birth wt	Cow-Calf birth	Cow wt -wean	Wean wt	Wean mat	Cow-Calf wn	Post wn wt	ADG	Veld growth	FCR	Skin Thickn	Scrotum	Heifer Fert	Cow Fert.	Longevity	Height	Length	EMA	Fat	Marbling
		Sire ID	Dam ID																																

Breeding Values and Accuracies: Cows & Heifers

Value <80

Value >120

Breeding values with an accuracy < 5% are not printed

Animal				Selection Values										Birth			Wean			Growth & Adaptability					Fertility			Frame		Carcass						
ID	Animal no	% Inbreeding	Genomic Parentage	Index EBV Acc		Calv. Ease V	Calf Growth V	Milk Value	Maint. V	Fertility V	Cow Value	Wean Calf V	Growth Value	Prod. Value	Carcass V	Cow wt -brth	Birth wt	Cow-Calf birth	Cow wt -wean	Wean dir	Wean mat	Cow-Calf wn	Post wn wt	ADG	Veld growth	FCR	Skin Thickn	Scrotum	Heifer Fert	Cow Fert.	Longevity	Height	Length	EMA	Fat	Marbling
				Sire ID	Dam ID																															

Selection List on Cow Value

Cows 2 years and older

ID	Name	Sire ID	Dam ID	Visual Score	Horned / Polled	Myostatin	Genomic test	Calving Ease Value	Calf Growth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Weaner Calf Value	Growth Value	Prod Value	Carcass Value
Sorted on ID				% Inbreeding		Q204X nt821 F94L		Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc
Italics: DNA Test																	

Selection List on Cow Value

Heifers younger than 2 years

ID	Name	Sire ID	Dam ID	Visual Score	Horned / Polled	Myostatin	Genomic test	Calving Ease Value	Calf Growth Value	Milk Value	Maint. Value	Fertility Value	Cow Value	Weaner Calf Value	Growth Value	Prod Value	Carcass Value
Sorted on ID				% Inbreeding		Q204X nt821 F94L		Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc	Acc
Italics: DNA Test																	

